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"PATENT"

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/712,512 Confirmation No. 8931  
Applicant : Pavel Holub  
Filed : 11/13/2003  
Art Unit : 1714  
Examiner : Sanders, Kriellion Antionette  
  
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Customer No. : 33249  
  
Date : April 19, 2007

Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

DECLARATION PURSUANT TO 37 C.F.R. § 1.132

Sir:

I, Pavel Holub, declare and state:

1. I have been employed by Hexion Specialty Chemicals, Inc. or its predecessor company, Resolution Specialty Chemicals, where my title is currently "Research and Development Manager" since 1998.
2. My educational background includes an equivalent of a Masters of Science in Polymer Chemistry and Technology obtained from the Institute of Chemical Technology, in Prague, Czech Republic.
3. I am an inventor or co-inventor on at least 2 U.S. patents relating to adhesives and polymers.

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4. I am an author of at least 5 technical papers dealing with emulsion polymers and polymerization presented at regional and global events.

5. I am a member of the advisory board of the "Stichting Emulsion Polymerization" at Technical University in Eindhoven, the Netherlands.

6. I am an inventor of the invention claimed in the above-identified application.

7. The dispersion of the present application produces a product different from that of Desor *et al.*, and such differences are attributable to the reversion of the process stages involved. The present application produces a product with improved hot block-resistance, gloss on glass, and film formation at low temperatures over Desor *et al.*

8. Different block resistance and film formation of a polymer can be used to indicate different polymer products.

9. Different morphology of "hard" and "soft" domains in multistage polymerization processes produces different polymers. Polymerization of a "hard" monomer contributes to the block resistance of the polymer. Polymerization of a "soft" monomer contributes to the film formation of the polymer.

10. One expects properties such as good block resistance but poor film formation when a polymer is made with a first stage polymerization of a "soft" monomer and a second stage polymerization of a "hard" monomer. The polymer of Desor *et al.*, demonstrates, as expected, the properties of poor film formation.

11. One expects properties such as good film formation but poor block resistance when a polymer is made with a first stage polymerization of a "hard" monomer and a second stage polymerization of a "soft" monomer. In contrast, the present application unexpectedly demonstrates the properties of good block resistance.

12. A reversion of the process stages of Desor *et al.*, unexpectedly produces a product with properties such as improved hot block-resistance, gloss on glass, and film formation at low temperatures.

13. Desor *et al.*, U.S. Patent No. 6,005,042 teaches a first stage polymerization of a "soft" monomer and a second stage polymerization of a "hard" monomer.

14. The present application teaches and claims a first stage polymerization of a "hard" monomer and a second stage polymerization of a "soft" monomer.

15. I supervised the testing of example 1 in the specification of the current application, which imitates the "hard" to "soft" polymer of the present application.

16. I supervised the testing of example 3 in the specification of the current application, which imitates the "soft" to "hard" polymer of Desor *et al.*

17. I observed that hot block-resistance and film formation at low temperatures of a transparent coating composition are improved with the "hard" to "soft" polymer, imitating the polymer of the present application, compared to the "soft" to "hard" polymer, imitating the polymer of Desor *et al.* The specification of the current application provides the data for the summary of results presented below.

Table 1

	Example 1 "hard" to "soft" polymer	Example 3 "soft" to "hard" polymer
Hot-Block Resistance 125g/cm <sup>2</sup> - 6 hours at 50°C	10	5
Film formation at low temperature (5°C/50% R.H.)	Excellent	Good

18. I observed that hot block-resistance, gloss on glass, and film formation at low temperatures of a solvent-free white gloss paint are improved with the "hard" to "soft" polymer, imitating the polymer of the present application, compared to the "soft" to "hard" polymer, imitating the polymer of Desor *et al.* The specification of the current application provides the data for the summary of results presented below.

Table 2

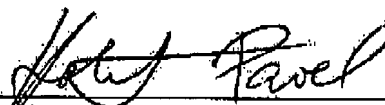
	Example 1 "hard" to "soft" polymer	Example 3 "soft" to "hard" polymer
Hot-Block Resistance 125g/cm <sup>2</sup> - 6 hours at 50°C	10	5
Gloss on glass (at 60°/20°)	82/53%	77/46%
Film formation at low temperature (5°C/50% R.H.)	Excellent	Good

19. The differences between Example 1, the "hard" to "soft" polymer, and Example 3, the "soft" to "hard" polymer, are attributable to the reversion of the process stages involved. The "hard" to "soft" polymer of the present application provides a different product with improved properties such as hot block-resistance, gloss on glass, and film formation at low temperatures over a polymer made with the "soft" to "hard" process of Desor *et al.*

20. I further declare that all statements and representations made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and representations were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued therefrom.

04/30/2007

Dated



Pavel Hofub  
Research and Development Manager  
Hexion Specialty Chemicals, Inc.